

# Tips for Preparing Your Floodplain Project for a Successful Review at the Local Level

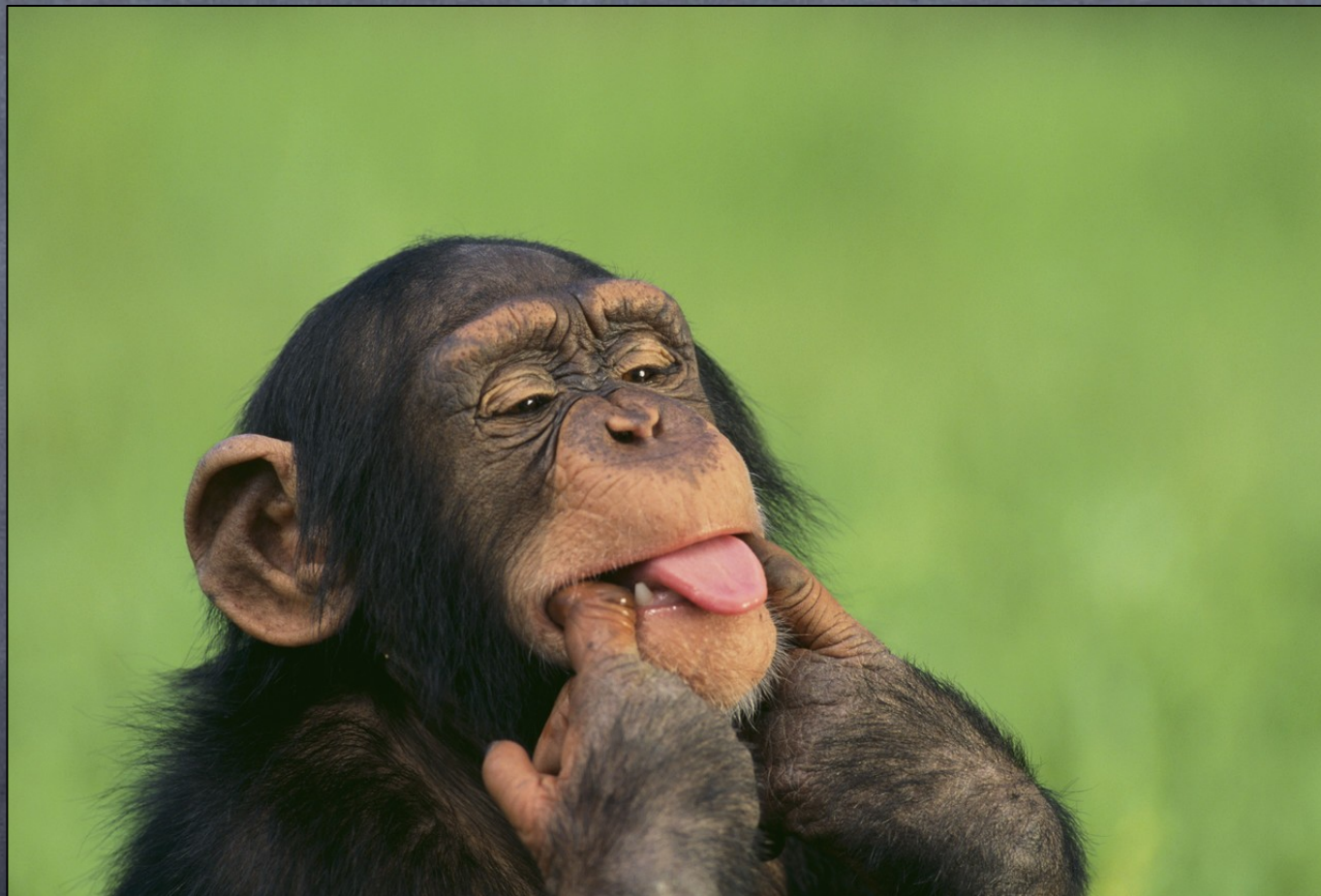
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Gallatin County  
Planning Director &  
Floodplain  
Administrator





# Disclaimer

This is an engineering workshop, but I'm not an engineer! I'm a land-use planner.





# Tips for Success

- Gain an understanding of the NFIP program
- Work within your scope of expertise
- Obtain permits before you do the work
- Submit a complete application
- Post-project certification



# Tip #1

Familiarize Yourself with the  
Requirements of the NFIP and  
the Local Community's  
Floodplain Regulations



# Why Do We Manage Floodplain Development?

- Because its fun?
- Local communities have to in order to maintain eligibility for federal disaster relief funds
- Guide the development of the 100-year floodplain by insuring regulations balance the greatest public good with the least private injury (assure the actions of one landowner are not to the detriment of another landowner or the public).
- Identify lands unsuitable for certain development purposes due to hazards.
- Minimize the need for rescue and relief efforts.



# Progressive Floodplain Management

- If all our flood maps are accurate and regulations enforced, how come we keep experiencing ever-increasing damages from floods?
- Progressive floodplain management acknowledges imperfect flood hazard prediction and errs on the side of protecting public health and safety!
- “Eyes Wide-Open” Approach



# Flooding in Montana

## What's the big deal?









Don't we want  
to leave behind  
a better  
legacy?





















# Permitting Process

- Gather general information about project
- Schedule pre-submittal meeting with floodplain administrator
- Preparation of permit application
- Submittal of Application/Application Review
- Record of decision
- If approved, construction of project
- Post-construction certification



“All you communities around the state need to get together and standardize your permitting requirements. Each community having different requirements is just ridiculous.”

Engineer



# Understand the Hierarchy

- The NFIP is a federal program, but it emphasizes local control and even rewards local efforts to mitigate flood hazards and minimize flood damage (e.g. the CRS program).
- Federal ~ minimum standards
- State - Floodplain & Floodway Management Act & A.R.M. ~ must meet or exceed federal standards
- Local Regulations ~ must meet or exceed State standards.



# *Nature vs. FEMA*

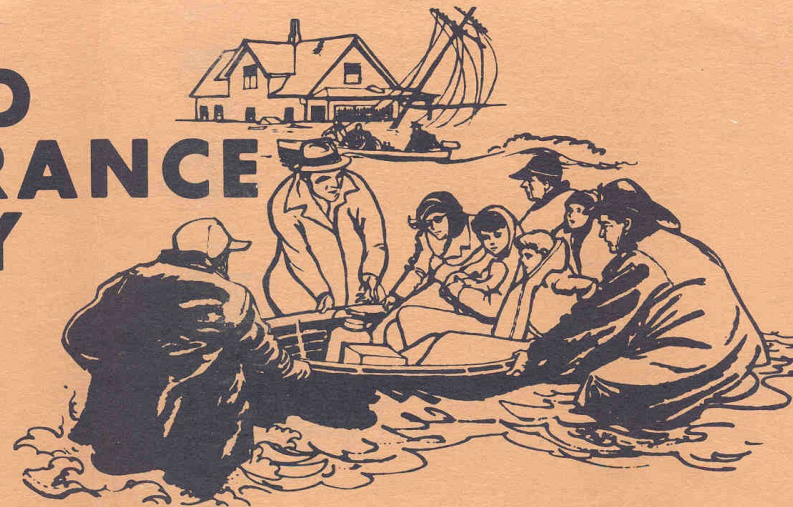


*100-year floodplain is a FEMA creation. It is an estimate. Water frequently flows over this floodplain during much smaller events.*



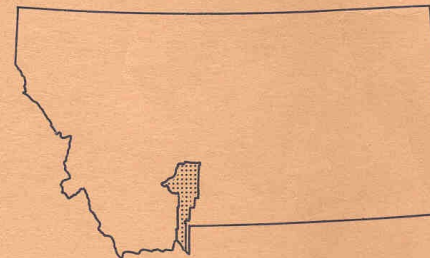
# Flood Insurance Studies

## FLOOD INSURANCE STUDY



GILLILAN ASSOCIATES, INC.  
613 WEST LAMME  
BOZEMAN, MT 59715  
406-582-0660

GALLATIN COUNTY,  
MONTANA  
UNINCORPORATED AREAS



FEBRUARY 1, 1984



Federal Emergency Management Agency

COMMUNITY NUMBER-300027



NATIONAL FLOOD INSURANCE PROGRAM

**FIRM**

**FLOOD INSURANCE RATE MAP**

**GALLATIN COUNTY,  
MONTANA**

(UNINCORPORATED AREAS)

**MAP INDEX**

PANELS PRINTED: 170, 180, 190,  
285, 305, 310, 315, 320, 340, 405,  
415, 430, 440

**COMMUNITY-PANEL NUMBERS**  
300027 0001-0900

**EFFECTIVE DATE:**  
**AUGUST 1, 1984**



Federal Emergency Management Agency

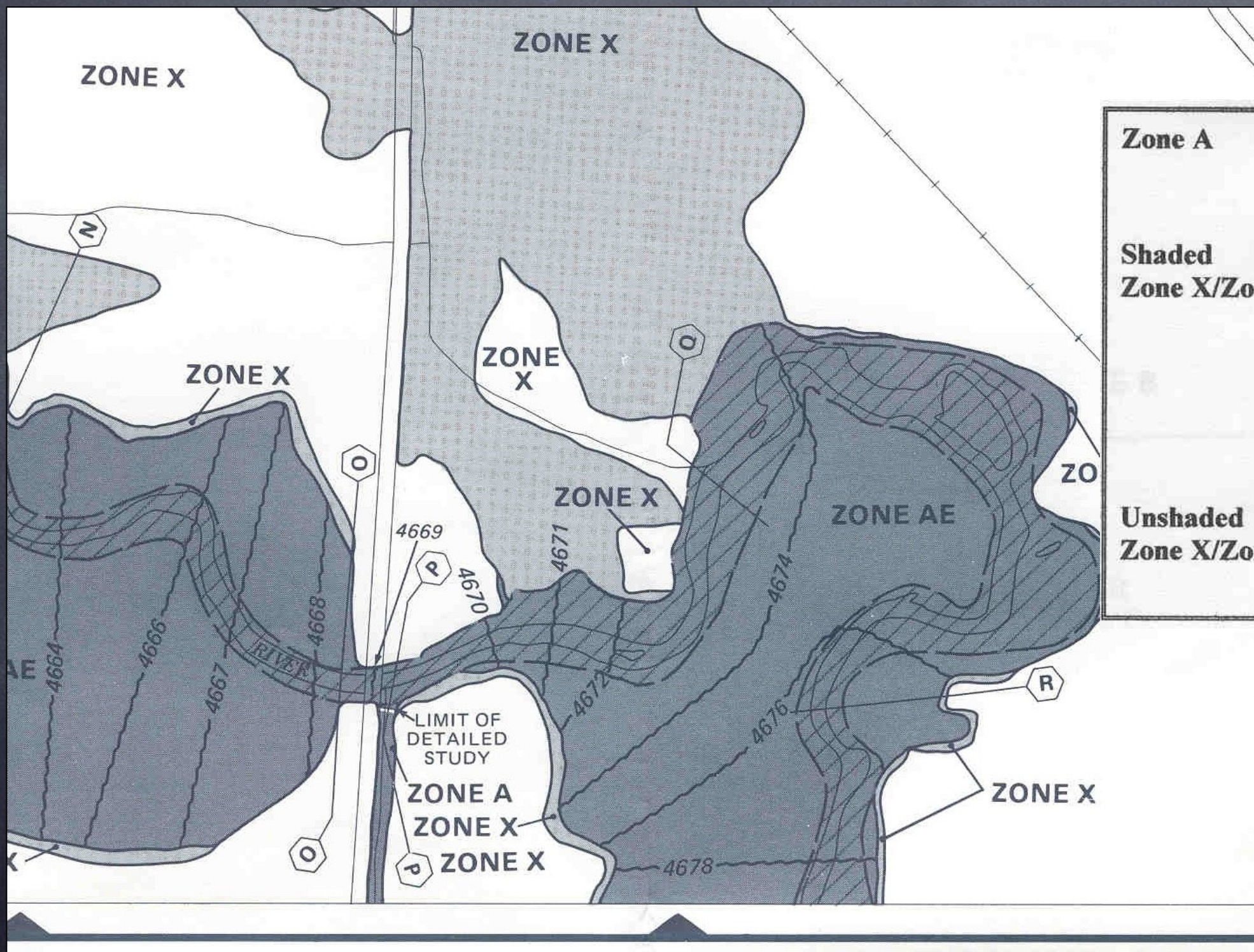
# FIRM

Purpose: for lenders and insurance agents to assign insurance premiums based on risk

What they don't do: always accurately predict flood behavior and flood hazard. Newer maps made with modern methods do a better job.



# Floodplain Maps Represent a Snapshot in Time

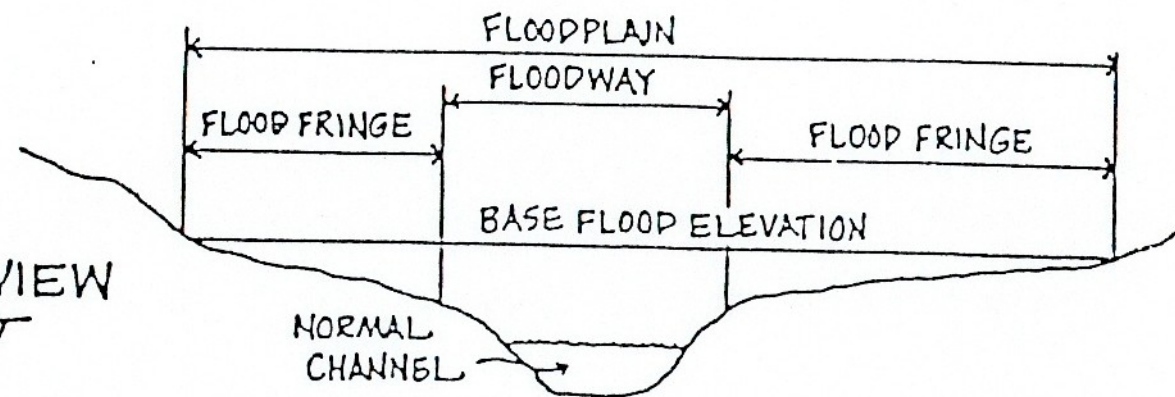


<b>Zone A</b>	Special flood hazard areas inundated by 100-year flood.
<b>Shaded Zone X/Zone B</b>	Areas of 500-year flood; areas of 100-year flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 100-year flood.
<b>Unshaded Zone X/Zone C</b>	Areas determined to be outside 500-year flood plain.

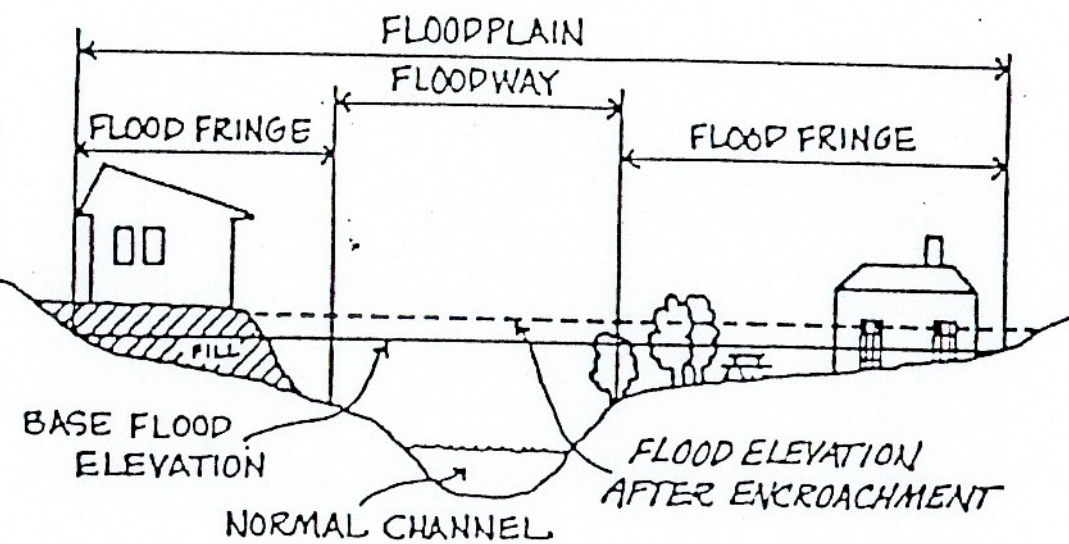


# 100-YEAR FLOODPLAIN

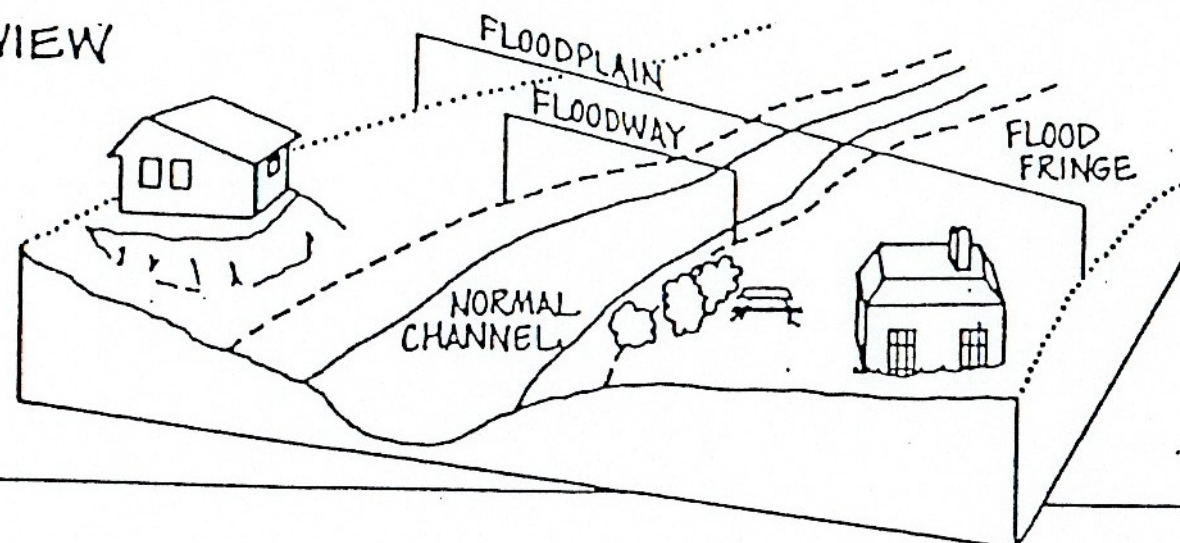
CROSS-SECTIONAL VIEW  
NO DEVELOPMENT



CROSS-SECTIONAL VIEW  
WITH EXISTING &  
NEW DEVELOPMENT



PERSPECTIVE VIEW





# “Flood maps missed mark; Pacific homeowners got soaked”

*The Seattle Times* – 1/26/2009

## Flood maps missed where the flooding happened

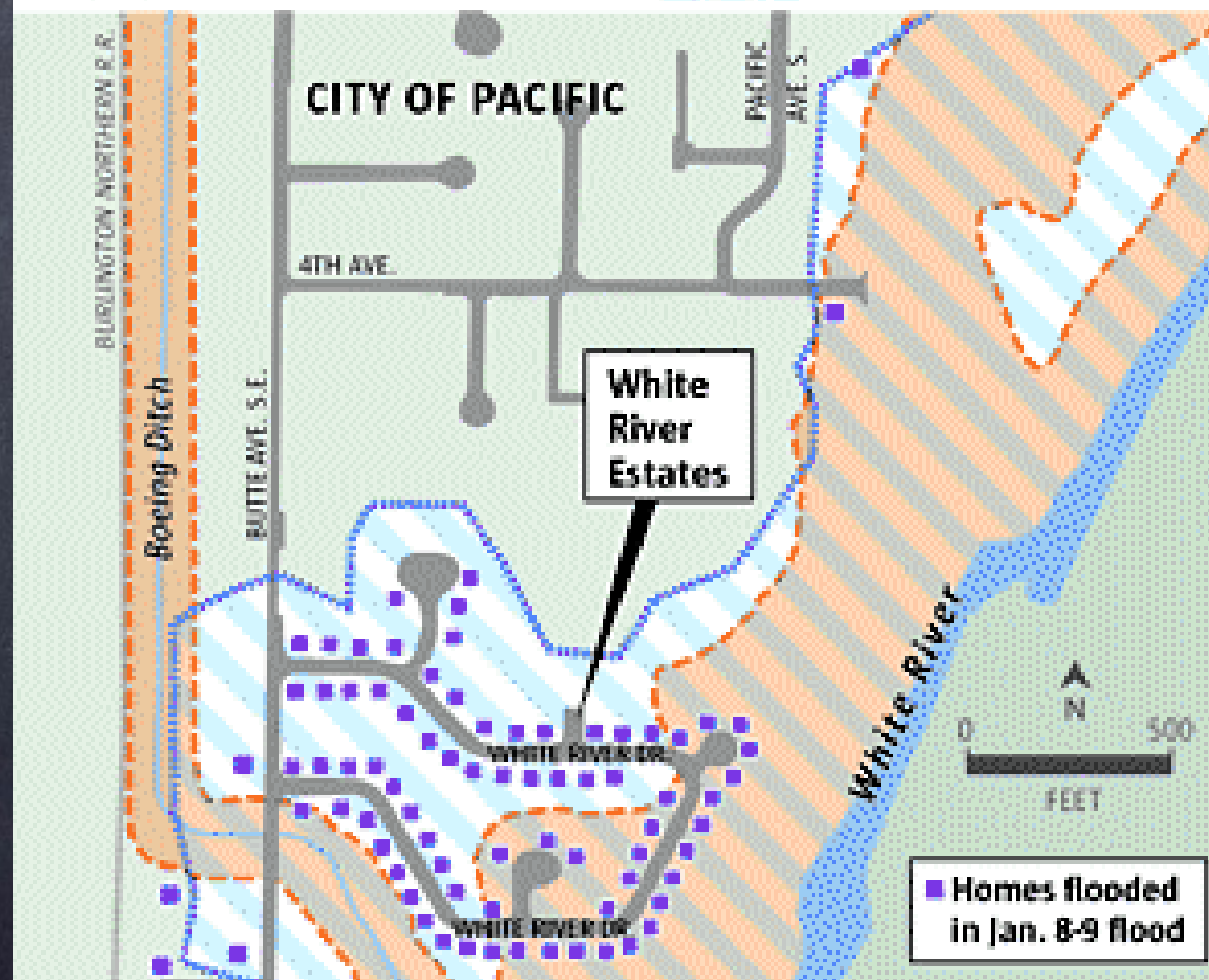
Federal floodplain maps, crucial to decisions about who gets flood insurance and where development happens, failed to reflect reality in recent flooding in Pacific.

CURRENT FEDERAL MAP

100-year flood

ACTUAL FLOOD (JAN. 8 AND 9, 2009)

Area flooded



Sources: FEMA, city of Pacific

THE SEATTLE TIMES

- “Natural erosion digs part of the channel deeper, and fills other parts with gravel. The White River is notoriously fast-changing.”
- “New development upstream can take up space in the floodplain, forcing more water downstream.”



# Not a perfect system!





# Local Control

- Locals are in the best position to assess and understand their particular flood hazards.
- Locals are in the best position to understand and assess the balance between political will and risk tolerance in their communities.
- Locals are in the best position to know what information they need to review a project.
- Locals are the ones that make the decision on whether or not to approve a project.



# Floodplain Regulations vs. Insurance Requirements

- Not always consistent
- “Lowest floor” vs. threshold elevation
- Crawlspace vs. basement
- Wet floodproofing vs. dry floodproofing
- LOMC
- It is not the responsibility of the local community to advise a property owner on the insurance ramifications of a proposed project



# Tip #2

Practice Within Your  
Scope of Expertise



What is your area of expertise in the floodplain arena?

- Engineering
- Regulatory/Permitting
- Insurance
- Legal
- Natural Resource Management

Know who the experts are in the other topical areas and use them as resources!



How much experience do you have designing and permitting floodplain projects?

- Obtain Training
- Ask Questions / Seek Guidance
- Request Peer Review
- Turn Mistakes into Learning Opportunities



Don't Buffalo Me!



U.S. Fish and Wildlife



# Know the Local Flooding Patterns

- Ice Jams ~ December ~ March
- Snowmelt +/- Frozen Ground ~ March
- Rain Events +/- snowmelt ~ June
- Debris jams
- Channel Migration
- Emergency levees (heaps of dirt)



# Ice Jam





# Debris Jam



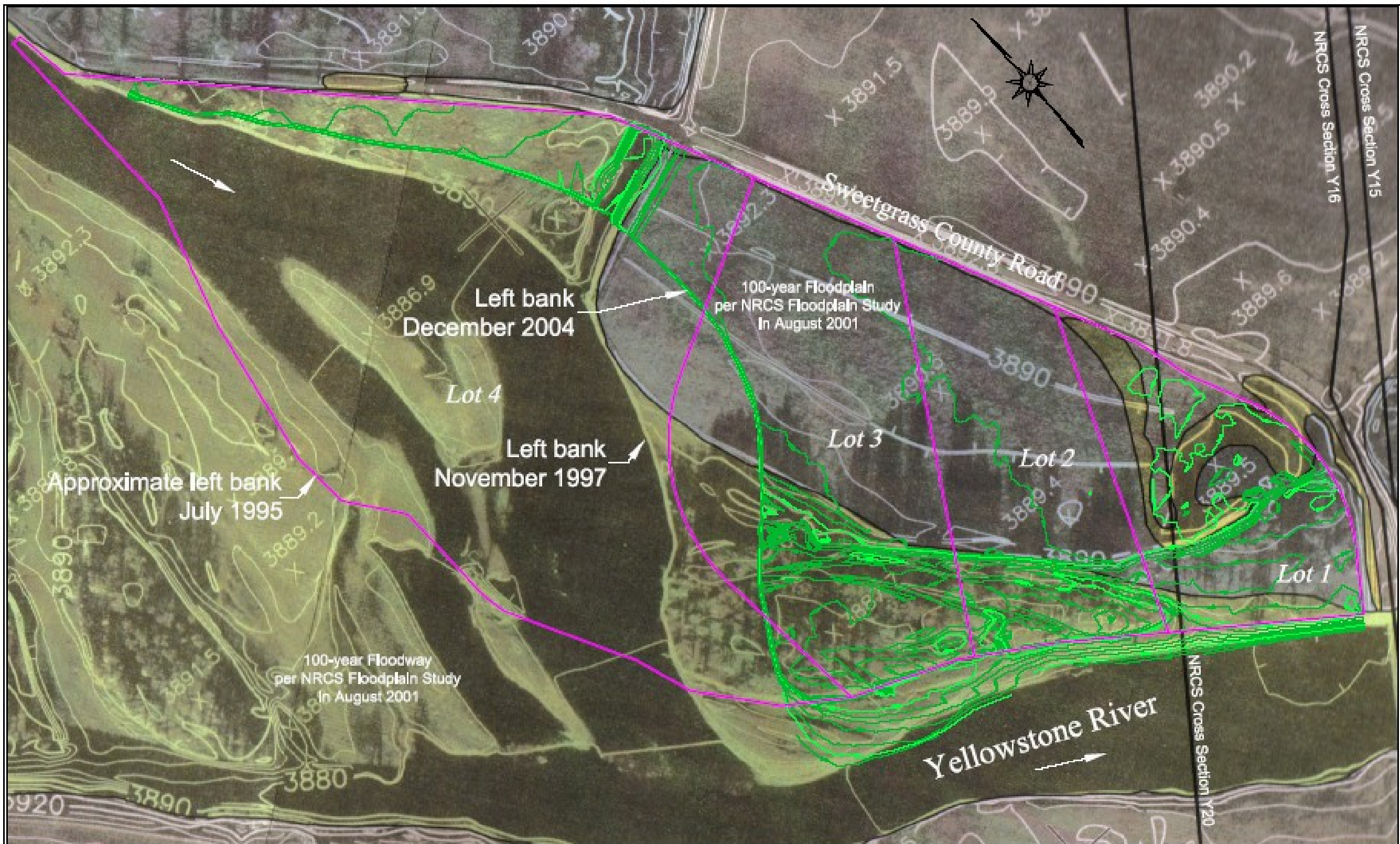


# Channel Migration

W. Gallatin, June 1986







PROJECT NO.	DRAWN BY	DATE		 <b>GATEWAY ENGINEERING &amp; SURVEYING, INC.</b> 2020 CHARLOTTE STREET BOZEMAN, MONTANA 59718 Phone: (406) 587-6545 Fax: (406) 587-7676	Topographic Map with NRCS Airphoto from November 1997	River Meadows Subdivision Greycliff - Yellowstone River Sweet Grass County, Montana	<b>EXHIBIT</b> <b>B</b> PROJECT # DATE 12/18/04
			PROJECT ENGINEER JAC DRAWN BY JAWALK DATE 12/18/04				



# Precipitation Coinciding with Peak Runoff





Just because you can  
doesn't mean you should!





## Tip #3

Obtain all required permits  
before performing work.



How about seeing this picture on the front page of the newspaper? Did they have a floodplain permit?





**Mayor says bridge to complete  
trail system will go in July**



# More Headlines

- Logan Veteran's Fishing Park Dedicated

*Belgrade News, May 24, 2011*

- Facts Should Guide Agencies  
Concerned with Fishing Park

*Belgrade News, November 2, 2011*

- EPA Orders Fishing Park to be  
Restored

*Belgrade News, February 21, 2012*



# After-the-Fact Permitting

- Puts everyone on defense & complicates review
- Enhanced public & political scrutiny
- Forensic engineering
- More expensive for client
- High likelihood that project will have to be modified to meet requirements of regulatory agencies
- Possibility of fines being levied



# “Emergency” Projects

- There are legitimate emergencies, but they are few and far between.
- Lack of planning on someone else's part does not constitute an emergency!
- Work done under “emergency” provisions often has to be redone or substantially modified to meet the requirements of regulatory agencies.
- If crucial infrastructure or structures are not threatened, often better waiting to obtain all necessary permits.



# Tip #4

Submit a Complete Application



# Permitting Process

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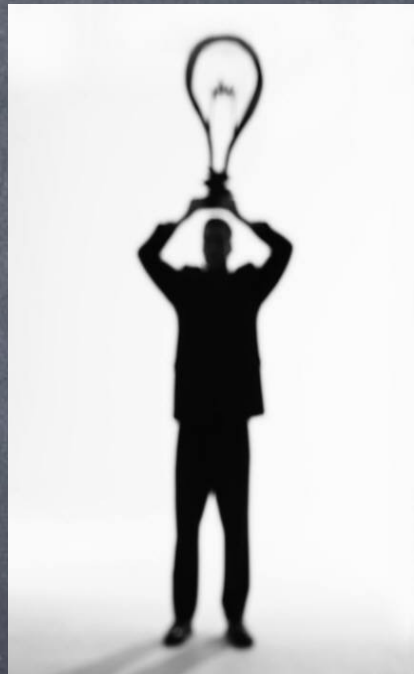
# Joint Application Form

- This application form is intended to add convenience to applicants who need to obtain permits from a variety of agencies for the same project/activity.
- It carries no regulatory authority.
- Encourages applicants to contact the local floodplain administrator prior to submitting the application.
- Many local governments require additional information to supplement the joint application.



# Do

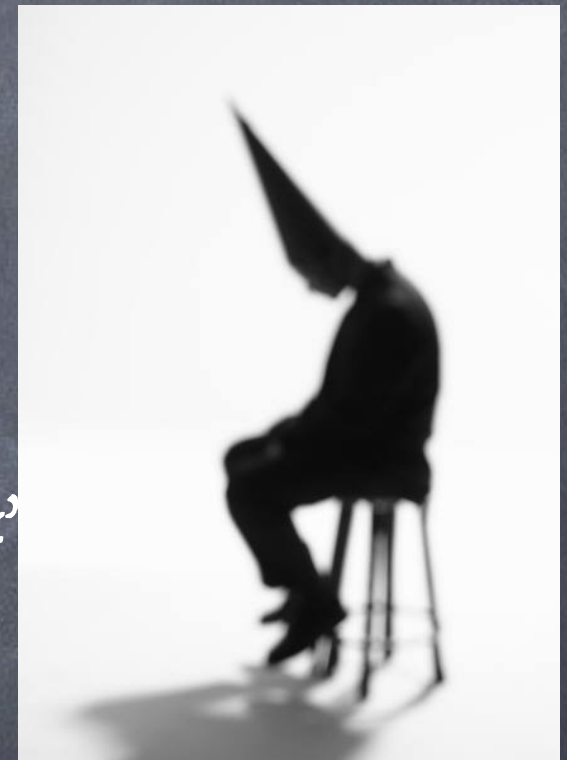
- Plan ahead, read the Community's Floodplain Ordinance, and familiarize yourself with the application review process
- Call the Floodplain Administrator with any questions about the project or submittal requirements prior to compiling the application
- Consider requesting a pre-submittal meeting or multi-agency site visit prior to submitting applications for complicated projects
- Provide adequate documentation
- Use an "eyes wide open" approach when considering flood hazards associated with the project & remember that issuance of a permit doesn't absolve you of liability in a civil matter
- When a CLOMOC is necessary, obtain it prior to submitting floodplain permits
- Remember the Floodplain Administrator has little control over federal or state standards





# Don't

- Blindside the Floodplain Administrator
- Start the project before you have obtained all required permits
- Submit an application for a use that is clearly prohibited by the community's ordinance
- Contact elected officials to exert political pressure on the review process
- Try to pass a violation off as an "emergency project"
- Have unrealistic expectations about the review process and associated timeline
- Forget about variances and appeals





# Tip #5

Follow Through with  
Post-Project Certifications



# Conditional Approval

- Authorizes a scope of work and provides stipulations for how work must be completed
- Permit not validated until documentation provided to show work was done in accordance with conditions of approval
- Comes back to bite people:
  - ☐ Request another permit for a new project
  - ☐ List property for sale or refinance
  - ☐ LOMC



# Some Common Denominators of Good Projects

- Engineers/consultants who know the resource and also take the time to learn the applicable rules and regulations
- Pre-submittal meetings – they get everyone on the same page
- Attention to detail and good documentation within the application
- An “eyes wide open approach” to assessing flood hazards



# Some Common Denominators of Unpleasant Projects

- Engineers/consultants working outside of their scope of expertise and/or not being very honest with their clients
- Unrealistic assessment of flood hazards – naïve landowners/consultants
- Sloppy work/poor documentation – as the landowner's representative you need to know what the rules are/or ask where to find them
- Applicants who think they are above the rules and would rather beg for forgiveness if they get caught than ask for permission before they do the work



# Questions?





# Contact Information

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Floodplain Administrator

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Bozeman, MT 59715

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[www.gallatin.mt.gov/planning](http://www.gallatin.mt.gov/planning)